



A320-X

Airframe Options

1. Introduction	3
2. Available Options	4
The [fltsim] section	4
The [Options] section	5
The [Callouts] section	7
The [Weights] section	8
3. Airline Examples	9

1. INTRODUCTION

The Flight Sim Labs A320-X series allows users to customise each airframe with a variety of options that are available. With these options, subtle differences between airlines, and also airframes within airlines can be modelled.

When loading the simulator after adding a new airframe, its configuration will be created using either a configuration file specific to this airframe, or by using an installed Airline Pack – available within the Downloads section on the Flight Sim Labs forum.

If neither a configuration file or an Airline Pack are installed for this airframe, then the options created will be based on defaults.

The logic when building the configuration settings for an airframe is as follows:

1. The simulator will attempt to load an airframe configuration file *<registration.cfg>* from the variant Airframe Configuration folder. Example:

This PC > Documents > Prepar3D v4 Add-ons > FSLabs > SimObjects > Airplanes > FSLabs A319 CFM > Airframe Configs				
Name	Date modified	Type	Size	
CS-TTS.cfg	5/6/2019 4:43 PM	CFG File	1 KB	
EC-MIR.cfg	5/6/2019 4:43 PM	CFG File	1 KB	
EI-FMT.cfg	5/6/2019 4:43 PM	CFG File	1 KB	
G-EZEZ.cfg	5/6/2019 4:43 PM	CFG File	1 KB	
installed.ini	5/13/2019 2:25 PM	Configuration sett...	1 KB	

2. If no *<registration.cfg>* can be found, the simulator will attempt to build the configuration from an installed Airline Pack.
3. If no airline pack for the airframe is installed, then default options will be used.
4. Once loaded, these options can be changed through the MCDU -> OPTIONS pages. These changes will then be retained.

Once a newly installed airframe has been processed, its registration will be added to the installed.ini file. Only if the airframe registration is manually removed from this file, or if the file is deleted – will the airframe options be rebuilt using the sequence previously described. You can *reset* the currently loaded airframe – or all airframes from within the MCDU OPTIONS, as illustrated below:

RESET THIS AIRFRAME – (1)

When selected, resets the flag used to rebuild the currently loaded airframe on next load of the simulator.

RESET ALL AIRFRAMES – (2)

When selected, resets the flag used to rebuild all airframes on next load of the simulator.

Once one of the above options are selected, the airframe(s) will have their options regenerated from the *<registration.cfg>* or Airline Pack on next loading of the simulator.



Example Registration Configuration file (G-EZEZ.cfg)

```
[fltsim]
selcal_id=EMKS
airframe_msn=2360
num_wing_exits=2
max_num_pax=156

[Options]
unit_weights=kg
unit_temperature=c
unit_volume=qt
metric_alt=0
unit_baro=hpa
cids_cabin_memo=0
cids_cabin_call=1
cids_boarding_music=0
sdac_v1_call=0
sdac_pressure_mon=0
fmgc_thr_red=1000
fmgc_thr_acc=1000
fmgc_eng_out_acc=1000
fmgc_airport_rwy_limit=1700

[Weights]
basic_airframe_weight=40517
max_zero_fuel_weight=57000
max_landing_weight=61000
max_takeoff_weight=64000

[Callouts]
Two_Thousand_Five_Hundred=0
Twenty_Five_Hundred=0
2000=0
1000=0
400=0
300=0
200=0
100=0
50=1
40=1
30=1
20=1
10=1
5=0
```

2. AVAILABLE OPTIONS

The [fltsim] section:

The below table contains parameters used to define possible airframe and airline parameters:

[fltsim]				
Parameter	Type	Description	Options	Example
selcal_id	String	The SELCAL code of the airframe	-	selcal_id=KM-CG
airframe_msn	String	The airframe serial number	-	airframe_msn=1574
airline_iata_code	String	The airline IATA code	-	airline_iata_code=BA
airline_icao_code	String	The airline ICAO code	-	airline_icao_code=BAW
num_wing_exits	Number	The number of overwing exits each side (A319 only) No entry assumes 2 overwing exits each side	1 or 2	num_wing_exits=1
max_num_pax	Number	The maximum number of passengers for the airframe No entry will use the FSL default number of pax	-	max_num_pax=156
num_ACTs	Number	The number of additional center tanks (A321 only) No entry assumes no additional center tanks	1 or 2	num_ACTs=2

■ The options for 'num_wing_exits' is only applicable for the A319-X and can be omitted from the A320-X and A321-X titles

■ The options for 'num_ACTs' is only applicable for the A321-X at this time

The [Options] section:

The below table contains parameters used to define various airframe options:

[Options]				
Parameter	Type	Description	Options	Example
unit_weights	String	Weight units to be used (Kilograms or Pounds)	kg or lbs	unit_weights=kg
unit_temperature	String	Temperature units to be used (Centigrade or Fahrenheit)	c or f	unit_temperature=c
unit_volume	String	Volume units to be used (Quarts or Litres)	qt or lt	unit_volume=qt
metric_alt	Number	A flag to set Metric Alt on the PFD	0 = Disabled 1 = Enabled	metric_alt=0
unit_baro	String	Specifies the barometric units (Millibars or Inches)	hpa or hg	unit_baro=hpa
cids_cabin_memo	Number	A flag to set the type of memo displayed when cabin ready	0 = No memo 1 = Right memo 2 = Left Memo	cids_cabin_memo=0
cids_cabin_call	Number	A flag to set whether the cabin call the cockpit when ready	0 = No call 1 = Call	cids_cabin_call=1
cids_boarding_music	Number	A flag to set whether boarding music is played in the cabin	0 = No music 1 = Music	cids_boarding_music=1
fwc_icing_detectors	Number	A flag to set whether icing detectors are installed	0 = Not installed 1 = Installed	fwc_icing_detectors=0
sdac_v1_call	Number	A flag to enable the auto-V1 callout on takeoff	0 = Disabled 1 = Enabled	sdac_v1_call=0
sdac_pressure_mon	Number	A flag to enable the SDAC pressure monitor	0 = Disabled 1 = Enabled	sdac_pressure_mon=0

[Options] Continued				
Parameter	Type	Description	Options	Example
fmgc_thr_red	Number	FMGS default thrust reduction height (feet)	0-99999	fmgc_thr_red=1000
fmgc_thr_acc	Number	FMGS default thrust acceleration height (feet)	0-99999	fmgc_thr_acc=1000
fmgc_eng_out_acc	Number	FMGS default engine out acceleration height (feet)	0-99999	fmgc_eng_out_acc=1000
fmgc_airport_rwy_limit	Number	Minimum runway length required for display on ND		fmgc_airport_rwy_limit=1700
brake_fans	Number	A flag to enable brake fans (A321 only) No entry assumes brake fans are installed	0 = Not installed 1 = Installed	brake_fans=1
adm_buss	Number	A flag to enable Back Up Speed Scale No entry assumes enabled by default	0 = Not installed 1 = Installed	adm_buss=1
cargo_belts	Number	A flag to set GSX to either use cargo belts, or containers (AKH)	0 = AKH 1 = Belts	cargo_belts=0

The options for 'cargo_belts' is only applicable when using GSX. When selected, GSX will use belt loaders to put cargo onto the aircraft. When not selected, GSX will load cargo containers onto the aircraft.

The [Callouts] section:

The below table contains parameters used to define which height calls are announced:

[Callouts]				
Parameter	Type	Description	Options	Example
Two_Thousand_Five_Hundred	Number	Height callout 'Two Thousand Five Hundred'	0 = Disabled 1 = Enabled	Two_Thousand_Five_Hundred=1
Twenty_Five_Hundred	Number	Height callout 'Twenty Five Hundred'	0 = Disabled 1 = Enabled	Twenty_Five_Hundred=0
2000	Number	Height callout 'Two Thousand'	0 = Disabled 1 = Enabled	2000=0
1000	Number	Height callout 'One Thousand'	0 = Disabled 1 = Enabled	1000=1
400	Number	Height Callout 'Four Hundred'	0 = Disabled 1 = Enabled	400=0
300	Number	Height Callout 'Three Hundred'	0 = Disabled 1 = Enabled	300=0
200	Number	Height Callout 'Two Hundred'	0 = Disabled 1 = Enabled	200=0
100	Number	Height Callout 'One Hundred'	0 = Disabled 1 = Enabled	100=1
50	Number	Height Callout 'Fifty'	0 = Disabled 1 = Enabled	50=1
40	Number	Height Callout 'Forty'	0 = Disabled 1 = Enabled	40=0
30	Number	Height Callout 'Thirty'	0 = Disabled 1 = Enabled	30=1
20	Number	Height Callout 'Twenty'	0 = Disabled 1 = Enabled	20=1
10	Number	Height Callout 'Ten'	0 = Disabled 1 = Enabled	10=0
5	Number	Height Callout 'Five'	0 = Disabled 1 = Enabled	5=0

The [Weights] section:

The below table contains parameters used to define the airframe weights:

The units in the [Weights] section must match those specified by 'units_weights' under [Options]

[Weights]				
Parameter	Type	Description	Options	Example
basic_airframe_weight	Number	The basic airframe weight (includes engine oil and unusable fuel)	In Kgs or Lbs	basic_airframe_weight=40200
max_zero_fuel_weight	Number	The aircraft maximum zero fuel weight	In Kgs or Lbs	max_zero_fuel_weight=58500
max_takeoff_weight	Number	The aircraft maximum takeoff weight	In Kgs or Lbs	max_takeoff_weight=75500
max_landing_weight	Number	The maximum landing weight	In Kgs or Lbs	max_landing_weight=62500

| If no [Weights] section is specified, then this section will be automatically generated using the default weights for the aircraft variant. Therefore, it can be omitted if desired.

3. AIRLINE EXAMPLES

	easyJet	British Airways		Lufthansa		jetBlue
		Heathrow	Gatwick	A319	A320/21	
unit_weights	kg	kg	kg	kg	kg	lbs
unit_temperature	c	c	c	c	c	f
unit_volume	qt	qt	qt	qt	qt	lt
metric_alt	0	0	0	0	0	0
unit_baro	hpa	hpa	hpa	hpa	hpa	hg
cids_cabin_memo	0	0	0	2	2	0
cids_cabin_call	1	1	1	0	0	1
cids_boarding_music	0	1	1	0	0	0
fwc_icing_dectors	0	EUPA-EUPD	0	0	0	0
sdac_v1_call	0	0	0	0	0	0
sdac_pressure_mon	0	0	0	0	0	0
fmgc_thr_red	1000	1000	1000	1000	1000	1000
fmgc_thr_acc	1000	1000	1000	1000	1000	1000
fmgc_eng_out_acc	1000	1000	1000	1000	1000	1000
fmgc_airport_rwy_limit	1700	1700	1700	1700	1700	1000
brake_fans	1	Not on A321 MED* fleet or G-MEDK	1	1	1	1
adm_buss	1	MSN 3000+	MSN 3000+	1	1	1
cargo_belts	1	0	1	1	0	1
Two_Thousand_Five_Hundred	0	1	1	1	1	1
Twenty_Five_Hundred	0	0	0	0	0	0
2000	0	0	0	0	0	0
1000	0	1	1	1	1	0
400	0	0	0	1	1	1
300	0	0	0	1	1	1
200	0	0	0	1	1	1
100	0	1	1	1	1	1
50	1	1	1	1	1	1
40	1	0	0	1	1	1
30	1	1	1	1	1	1
20	1	1	1	1	1	1
10	1	0	0	1	1	1
5	0	0	0	1	1	1

Airframe Options



	Jetstar	Qantaslink	Air New Zealand
unit_weights	kg	kg	kg
unit_temperature	c	c	c
unit_volume	qt	qt	qt
metric_alt	0	0	0
unit_baro	hpa	hpa	hpa
cids_cabin_memo	0	0	0
cids_cabin_call	1	1	1
cids_boarding_music	1	1	1
fwc_icing_detectors	0	0	0
sdac_v1_call	0	0	0
sdac_pressure_mon	0	0	0
fmgc_thr_red	800	800	1000
fmgc_thr_acc	800	800	1000
fmgc_eng_out_acc	1500	1500	1500
fmgc_airport_rwy_limit	1700	1700	1700
brake_fans	1	1	1
adm_buss	1	1	1
cargo_belts	0	0	0
Two_Thousand_Five_Hundred	1	1	1
Twenty_Five_Hundred	0	0	0
2000	0	0	0
1000	1	1	1
400	0	0	0
300	0	0	0
200	0	0	0
100	0	0	0
50	1	1	1
40	1	1	1
30	1	1	1
20	1	1	1
10	1	1	1
5	1	1	1

Last revision: 14MAY19